

PKC-zeta

protein kinase C zeta

Recombinant Human Active Protein Kinase

HGNC Symbol: PRKCZ

Synonyms: PKC2

Product No.: 0117-0000-1

Lot: 005

Description: Human PKC-zeta, amino acids G₁₄-V₅₉₂ (as in [NCBI/Protein](#) entry NP_002735.3), N-terminal GST-HIS₆ fusion protein with a Thrombin cleavage site, expressed in Sf9 insect cells

Product identity: PKC-zeta Lot 005, was confirmed as PKC-zeta by specific Western blotting

Theoretical MW_{Fusion Protein}: 96,654

Expression host: Sf9 insect cells

Purification: GST-Affinity Chromatography

Activation: This kinase was not activated by special procedures

Storage buffer: 50 mM TRIS-HCl pH 8.0, 100 mM NaCl, 5 mM DTT, 15 mM reduced glutathione, 20 % glycerol

Storage temperature: -80°C

For complete recovery, mix well and spin before use. Product must not be stored in diluted solutions, aliquots below 10µl are not advisable. Avoid repeated freeze-thaw cycles!

Protein concentration: 0.181 µg/µl
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

Biochemical Parameters:

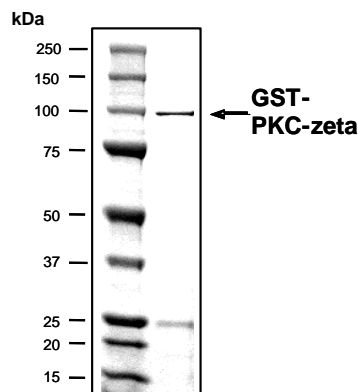
Specific kinase activity (P_i transfer): 83 pmol/µg × min
ATP-K_M: 3 µM

Additional assay technology:

PKC-zeta Lot 005 was also successfully tested by ProQinase for the use with the ADP-Glo™ Kinase assay from Promega
ADP-Glo assay conditions may vary from radiometric assay conditions, please inquire for assay details

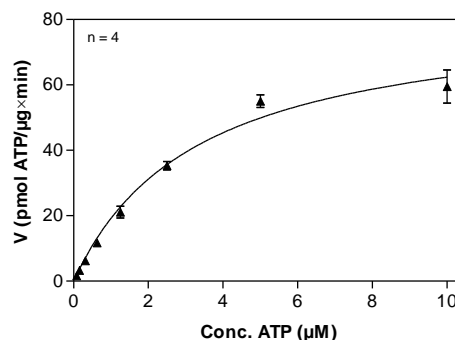
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PKC-zeta Lot 005: Coomassie stain



2.0 µg GST-PKC-zeta

PKC-zeta Lot 005: Determination of V_{max} and K_M value for ATP



Determination of K_M value & Specific activity:

- Assay conditions:
 - 60 mM HEPES-NaOH, pH 7.5
 - 3 mM MgCl₂; 3 mM MnCl₂; 1 mM CaCl₂
 - 4 mM EDTA
 - 5 µg/ml Phosphatidylserine
 - 1 µg/ml 1,2-Dioleoyl-glycerol
 - 3 µM Na-orthovanadate
 - 1.2 mM DTT
 - 50 µg / ml PEG_{20,000}
 - ATP (variable)
 - Substrate: PKC-derived peptide 20 µg/ml
 - PKC-zeta: 4 µg / ml
- Filter binding assay
- MSPH membrane (Millipore)

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GST-PKC-zeta Recombinant Fusion Protein Amino Acid Sequence							
1	MSPILGYWKI	KGLVQPTRL	LEYLEEKYEE	HLIERDEGDK	WRNKKFELGL	EFNLPYYID	60
61	GDVKLTQSM	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	DIRYGVSRIA	YSKDFETLKV	120
121	DFLSKLP EML	KMFEDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	180
181	KRIEAI PQID	KYLKSSKYIA	WPLQGWQATF	GGGDHPPKSD	PMGHHHHHG	RRRASVAAGI	240
241	LVPRGSPGLD	GIYARGIQAS	MGARGRVRLK	AHYGGDIFIT	SVDAATTFEE	LCEEVRDMCR	300
301	LHQHPLTLK	WVDEGDPCT	VSSQMELEEA	FRLARQCRDE	GLIIHVFPST	PEQPGLPCPG	360
361	EDKSIYRRGA	RRWRKLYRAN	GHLFQAKRFN	RRAYCGQCSE	RIWGLARQGY	RCINCKLLVH	420
421	KRCHGLVPLT	CRKHMSVMP	SQEPVDDKN	EDADLPSEET	DGIAYISSSR	KHDSIKDDSE	480
481	DLKPVIDGMD	GIKISQGLGL	QDFDLIRVIG	RGYAKVLLV	RLKKNQIYA	MKVVKELVH	540
541	DDEDIDWVQT	EKHVFEQASS	NPFLVGLHSC	FQTTSRLFLV	IEYVNGGDLM	FHMQRQRKLP	600
601	EEHARFYAAE	ICIALNFLHE	RGIIYRDLKL	DNVLLDADGH	IKLTDYGMCK	EGLGPGDTTS	660
661	TFCGTPNYIA	PEILRGEYGF	FSVDWWALGV	LMFEMMAGRS	PFDIITDNDP	MNTEDYLFQV	720
721	ILEKPIRIPR	FLSVKASHVL	KGFLNKDPKE	RLGCRPQTGF	SDIKSHAFFR	SIDWDLLEKK	780
781	QALPPFPQPI	TDDYGLDNFD	TQFTSEPVQL	TPDEDAIKR	IDQSEFEGFE	YINPLLLSTE	840
841	ESV						900

1-218: GST Red: HIS6-tag Pink: Thrombin cleavage site blue: PKC-zeta fragment

PKC-zeta wt ¹ Amino Acid Sequence							
1	MPSRTGPKME	GSGGRVRLKA	HYGGDIFITS	VDAATTFEEL	CEEVRDMCRL	HQQHPLTLKW	60
61	VDSEGDPCTV	SSQMELEEEAF	RLARQCRDEG	LIIHVFPSTP	EQPGLPCPGE	DKSIYRRGAR	120
121	RWRKLYRANG	HLFQAKRFNR	RAYCGQCSE	IWGLARQGYR	CINCKLLVHK	RCHGLVPLTC	180
181	RKHMSVMP	QEPVDDKNE	DADLPSEETD	GIAYISSSRK	HDSIKDDSED	LKPVIDGMDG	240
241	IKISQGLGLQ	DFDLIRVIGR	GSYAKVLLVR	LKKNQIYAM	KVVKELVHD	DEDIDWVQTE	300
301	KHVFEQASSN	PFLVGLHSCF	QTTSRLFLVI	EYVNGGDLMF	HMQRQRKLP	EHARFYAAEI	360
361	ICIALNFLHER	GIIYRDLKLD	NVLLDADGHI	KLTDYGMCKE	GLGPGDTTST	FCGTPNYIAP	420
421	EILRGEYGF	SVDWWALGV	MFEMMAGRSP	PFDIITDNDP	NTEDYLFQVI	LEKPIRIPRF	480
481	LSVKASHVLK	GFLNKDPKER	LGCRPQTGFS	DIKSHAFFRS	IDWDLLEKKQ	ALPPFPQPI	540
541	DDYGLDNFD	QFTSEPVQLT	PDEDAIKRI	DQSEFEGFEY	INPLLLSTEE	SV	600

blue: PKC-zeta sequence expressed in recombinant protein

¹[NCBI/Protein](#) accession number NP_002735.3

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